

Fig.1

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1 GAATTCATGG TGTTTTGATC ATTTTAAATT TTTATATGGC GGGTGGTGGG CAACTCGCTT 60
60 CCGGGCAACT CGCTTACCGA TTACGTTAGG GCTGATATTT ACGTAAAAAT CGTCAAGGGA 120
121 TGCAAGACCA AAGTAGTAAA ACCCCGGAGT CAACAGCATC CAAGCCCAAG TCCTTCACGG 180
181 AGAAACCCCA GCGTCCACAT CACGAGCGAA GGACCACCTC TAGGCATCGG ACGCACCATC 240
241 CAATTAGAAG CAGCAAAGCG AAACAGCCCA AGAAAAAGGT CGGCCCCTCG GCCTTTTCTG 300
301 CAACGCTGAT CACGGGCAGC GATCCAACCA ACACCCTCCA GAGTGACTAG GGGCGGAAAT 360
361 TTAAAGGGAT TAATTTCCAC TCAACCACAA ATCACAGTCG TCCCCGGTAT TGTCTGCGAG 420
421 AATGCAATTT AAACCTCTTCT GCGAATCGCT TGGATTCCCC GCCCCTGGCC GTAGAGCTTA 480
481 AAGTATGTCC CTTGTCGATG CGATGTATCA CAACATATAA ATACTAGCAA GGGATGCCAT 540
541 GCTTGGAGGA TAGCAACCGA CAACATCACA TCAAGCTCTC CCTTCTCTGA ACAATAAACC 600
601 CCACAGAAGG CATTT 615
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Fig.2

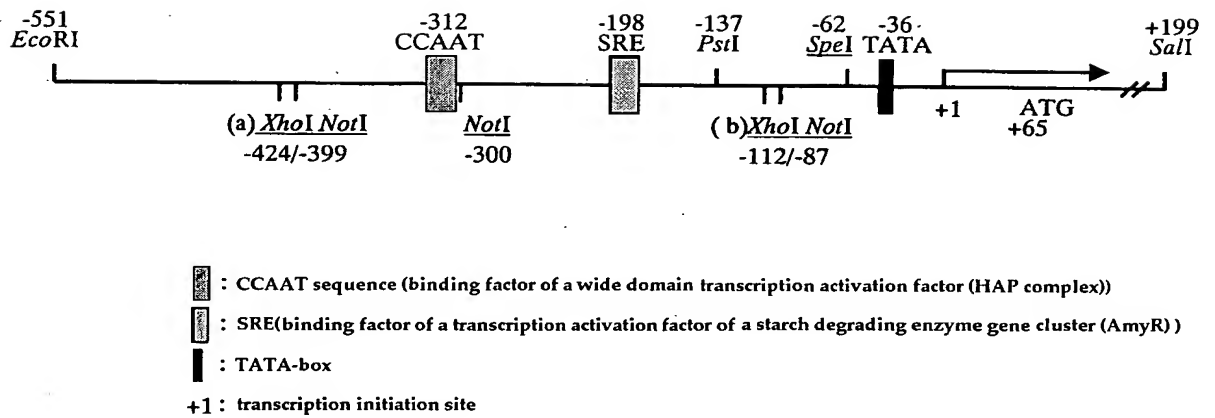
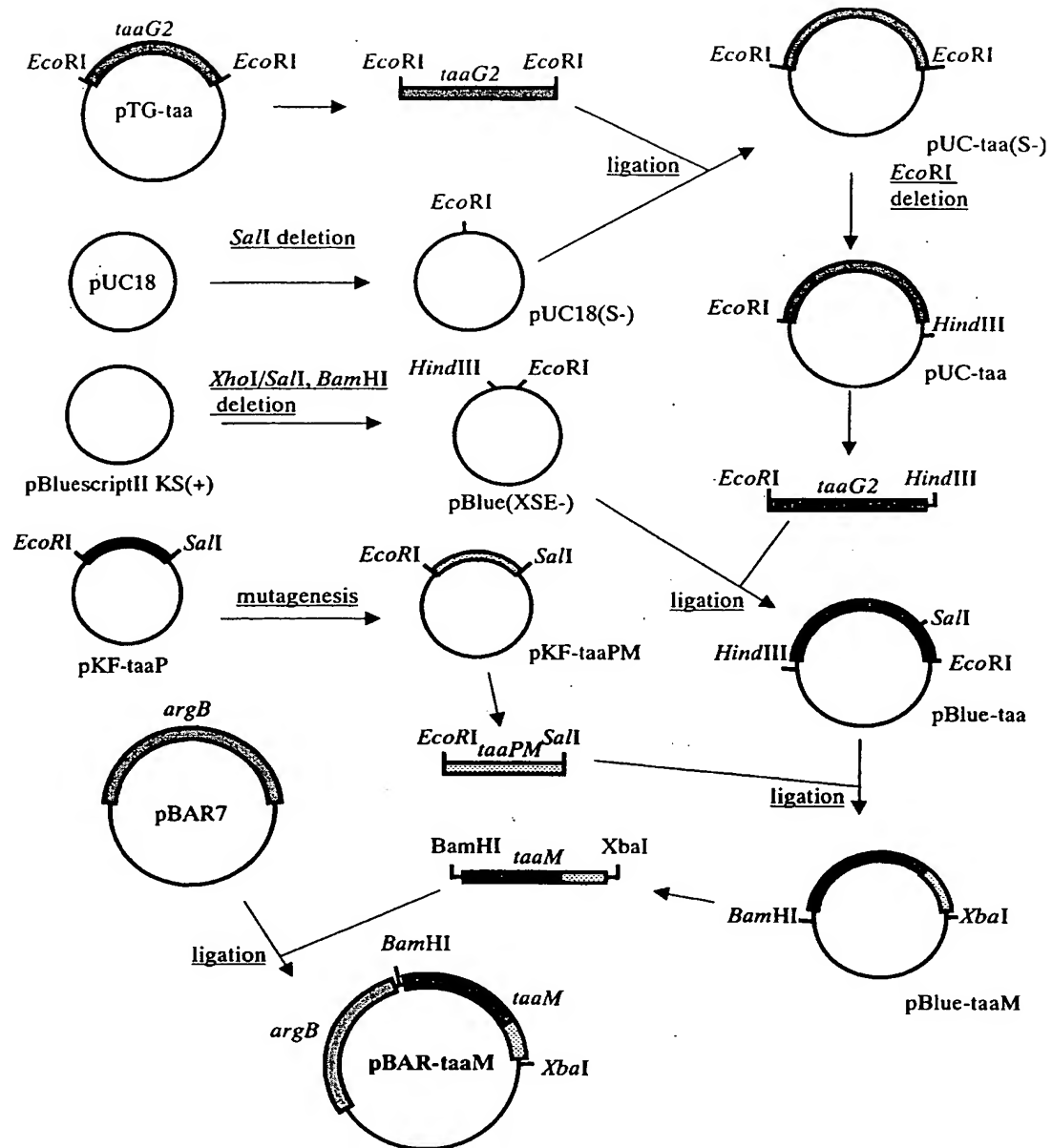


Fig.3



taaG2 : Taka-amylase A gene

argB : ornithine carbamoyltransferase gene (selection marker)

taaM : Taka-amylase including modified promoter

Fig.4

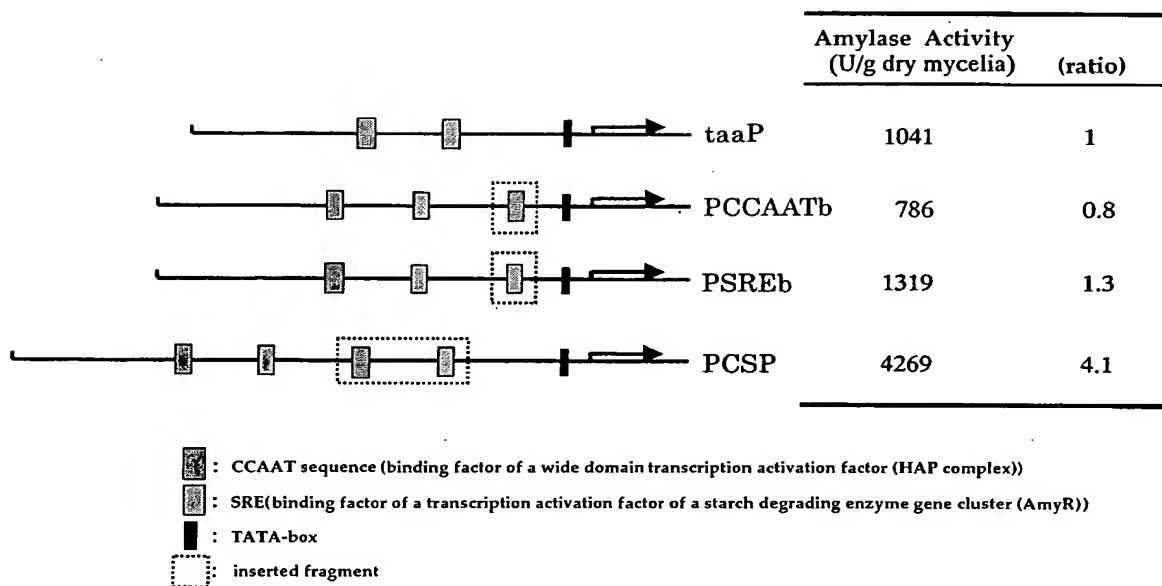
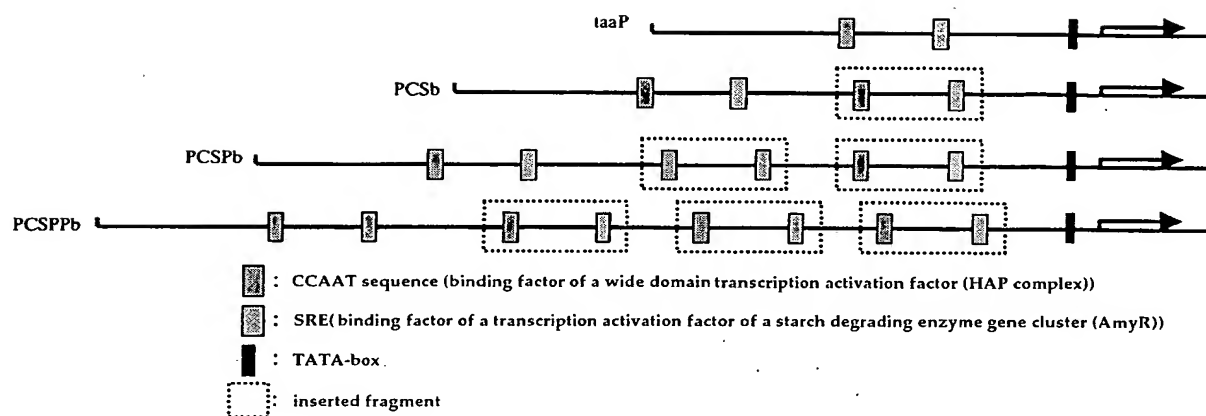


Fig.5



Promoter	Amylase Activity			
	Starch		Glucose	
	(U/g dry mycelia)	(ratio)	(U/g dry mycelia)	(ratio)
taaP	916	1	25	1
PCSB	4601	5.0	601	24.1
PCSPb	6455	7.0	740	29.6
PCSPPb	7084	7.7	941	37.7

Fig. 6

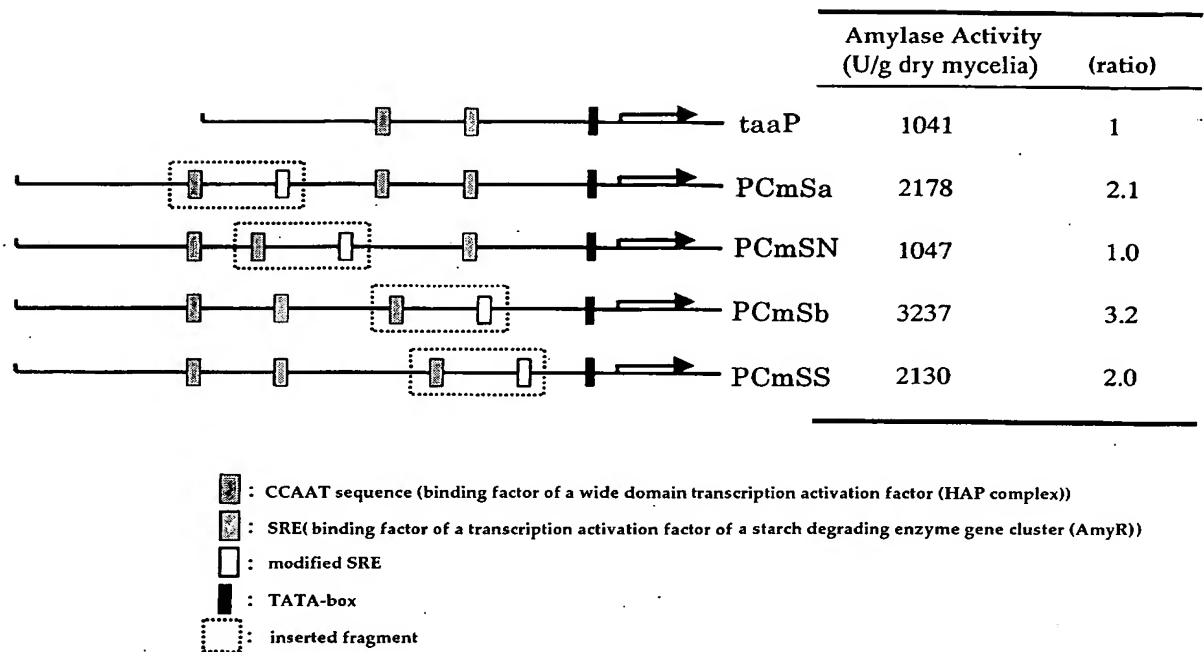


Fig. 7

Strain	Copy Number	Amount of Amylase	
		(g/L)	(ratio)
ABPU1	0	0.01	
taa2	1	0.29	1
CSb17	1	1.46	5.0
CSb16	multiple	9.90	34.1
CSP6	multiple	6.41	22.1
CSPb19	multiple	7.35	25.3

ABPU1 ; host taa2 ; wild type promoter

Fig. 8

Strain	Amount of Amylase (g/L)		
	SPY medium	MPY medium	GPY medium
CSP6	6.41	4.86	2.94
CSPb19	7.35	5.25	6.25

The production amount of amylase is shown as a conversion value as compared with the specific activity of Taka-amylase is 100 U/mg .

Fig. 9

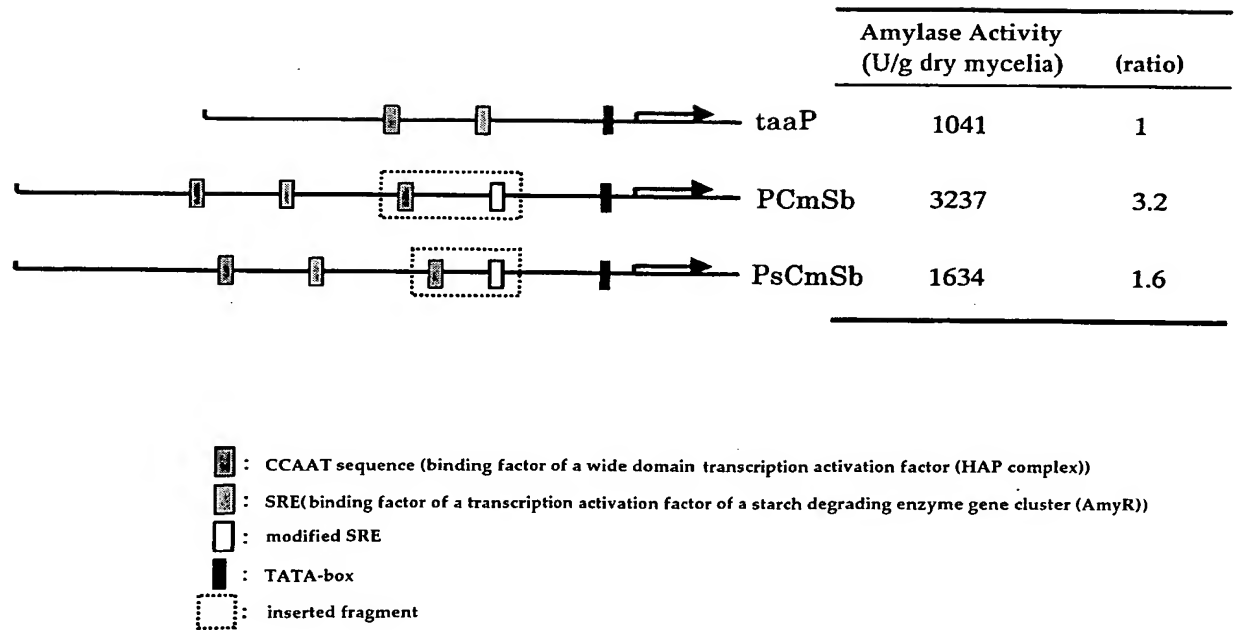


Fig. 1 0

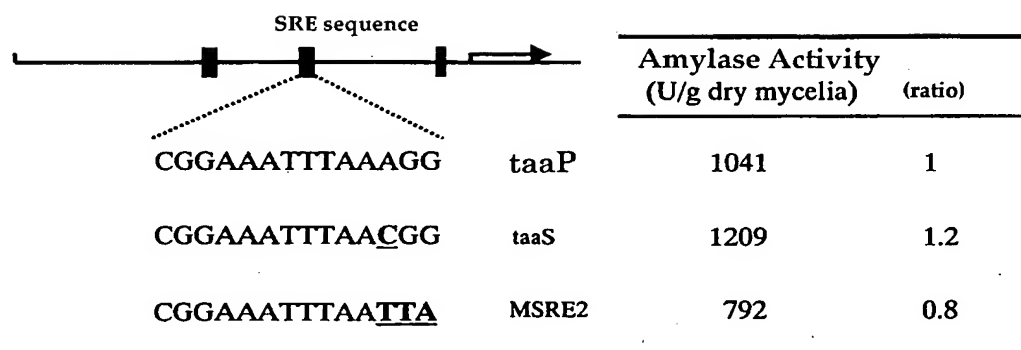


Fig. 1 1

Promoter	Amylase Activity			
	A. oryzae KBN616		A. oryzae KBN6217	
	(U/g mycelia)	(ratio)	(U/g mycelia)	(ratio)
non-recombinant strain	377	1	13003	1
PCSPb	21702	57.6	137179	10.6

Fig. 1 2

Promoter	Laccase Activity	
	(Δ O.D. / 0.1ml)	(ratio)
non-recombinant strain	0	-
taaP	174	1
PCSPb	136	0.8
PCSPPb	281	1.6

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